

Shoemaker (J.V.)

ELECTRICITY AS A COSMETIC.

BY

JOHN V. SHOEMAKER, A.M., M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, AND CLINICAL PROFESSOR
OF DISEASES OF THE SKIN, IN THE MEDICO-CHIRURGICAL COLLEGE OF
PHILADELPHIA; PHYSICIAN TO THE MEDICO-CHIRURGICAL HOSPITAL.

FROM
THE MEDICAL NEWS,

October 13. 1894.



[Reprinted from THE MEDICAL NEWS, October 13, 1894.]

ELECTRICITY AS A COSMETIC.

By JOHN V. SHOEMAKER, A.M., M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, AND CLINICAL
PROFESSOR OF DISEASES OF THE SKIN, IN THE MEDICO-CHIRURGICAL
COLLEGE OF PHILADELPHIA; PHYSICIAN TO THE MEDICO-
CHIRURGICAL HOSPITAL.

THE skin is frequently subject to morbid conditions, to depression or perversion of nutrition, which impair or destroy whatever advantages of person may have originally existed. Many of these conditions can scarcely lay claim to the title of actually developed disease, but are, so to speak, on the border-line. They undoubtedly depend upon faulty nutrition. The defect may be purely local, or it may be associated with a more or less perceptible deviation from the normal standard of general health. As a rule, some systemic disorder underlies a faulty action of the skin. Although the failure may be scarcely perceptible, it is, nevertheless, present.

The blemishes of which we shall treat in this paper often prove very unyielding to treatment by means of drugs. We possess, however, in electricity an agent much more powerful than medicinal substances. Electricity is peculiarly qualified to improve the nutrition and promote the functions of the skin, because it acts directly upon the part



affected, and also indirectly through the system at large. The topical application of electricity stimulates the capillary circulation through the integument, and overcomes any engorgement that may exist. It awakens the activity of the absorbent vessels, and enables them to remove morbid deposits. It acts favorably upon the nerve-fibers and their peripheral terminations, and exerts a beneficial influence upon the cells. By its tonic influence upon the heart, bloodvessels, and general circulation, electricity tends to maintain the normal type of nutrition in the skin as well as in other tissues. These properties enable us, by means of electricity, to relieve certain aberrations from the standard, trivial in themselves, and yet capable of causing much annoyance.

There is a dull, discolored, as it is often aptly termed, muddy, hue of the skin that nullifies the effect of regular features, and is not infrequently associated with a dejected or peevish expression. Some disorder of the digestive system is usually the foundation of this appearance of the skin. It is especially prone to occur in persons of dark complexion. Individuals thus affected require a total change in habits of life. It will often be found that they are of sedentary occupation, are overworked, and anxious. All the rules of hygiene must be strictly enforced, but there is no measure capable of so rapidly, so surely, and so effectually improving the complexion as electricity. In these cases there is undoubtedly some failure of general health, yet the subjects may scarcely be conscious of the fact. They are able to attend to their duties, and

mingle in society, yet the dingy skin is a source of mortification, particularly in the case of females. If the discoloration is uniform, or nearly so, upon the surface, it must depend upon the action of a general cause, and the electricity should be applied to wide areas by means of rollers or sponge electrodes. As it is upon the face that the individuals especially desire improvement, it is well to make the applications, above all, to that part of the body. The neck and shoulders, the hands and forearms, likewise require attention. In such cases the use of the metal cylinder constitutes a good means of affording the benefits of electricity. Galvanism is the preferable form in which to employ this agent. A somewhat similar discoloration may be relieved by the same procedure. I allude to the sallow or slightly icterode tinge so often manifested by persons of deficient hepatic activity, with a tendency to depression of spirits and symptoms of lithemia. The subjects are generally brunets, and the blending of yellow and brown gives them a distinct physiognomy. The employment of the galvanic current, the anode or positive pole being placed over the region of the liver, and the kathode or negative pole over the discolored surface, is followed usually by the best results. Cases of this kind often occur in families in which hepatic difficulties are common. The diet, and habits as regards eating, need to be rigidly supervised. This regulation, in conjunction with galvanism, causes the sallowness to disappear.

The direct effect of the galvanic current is beneficial in another slight, but common condition, and

the source of much mental disquiet. This is a greasy and shining appearance of the face, particularly the forehead and the tip and sides of the nose. Unfortunately, it is most common in women, and, above all, in young women. It occurs most often in those of dark complexion. This blemish denotes the existence of a slight degree of *seborrhæa oleosa*. Although restricted to but a small portion of the body, it is, in most instances, connected with some deviation from health, and not seldom such patients are anemic or chlorotic. Another annoyance connected with the presence of oily matter upon the face is the disposition of particles of dust to readily adhere to it, so that a dirty as well as greasy aspect is the result. Comedones are very liable to form under these conditions. The gaping orifices of the sebaceous ducts are often prominent, and from this appearance alone one is almost justified in diagnosing impaired health. The stimulating influence of galvanism corrects the relaxation of the ducts, improves the nutrition of the glands, and restrains their secretion within the normal limits as to quantity and quality.

A sluggish peripheral circulation, dependent upon an atonic state of the vessels and a flabby condition of the heart-muscle, finds expression in a red-tipped nose, which, upon exposure to the cold, becomes purple. This, again, is an affliction most common in women, who are often themselves responsible for the trouble by their neglect of exercise. The red nose is most common in thin, anemic, or strumous blonds. The local and general application of galvanism is the most powerful means at our command

for restoring the strength of the circulation and causing the habitual congestion to disappear.

An eruption of red papules is often seen in young women of from eighteen to twenty-two years of age. The patients are, for the most part, blonds, of a fair and delicate skin and blooming complexion. Their beauty is marred by the development, from time to time, of red spots upon the face, neck, and shoulders. The lesions are usually small and seldom suppurate. The spots are not numerous, are of a rose color, and are all the more conspicuous on account of the contrast with the white surface upon which they are seated. They cause extreme annoyance to their possessors. The patients are of a susceptible, nervous organization, frequently commit dietetic errors, and sometimes suffer from ovarian congestion or neuralgia. These cases receive more benefit from the direct employment of the faradic current than from any other method of treatment.

In the different forms of acne much good is accomplished by the use of electricity. The papules and tubercles undergo retrogression, suppuration is arrested, and itching and smarting are relieved. The faradic current, applied both centrally and locally, may be advantageously employed under these conditions. In some cases I derive better results from the alternate use of the faradic and galvanic currents.

One sometimes encounters cases of *rosacea* in the first or second stage in young women. Occasionally they complain that the rash is accompanied, in the afternoon and evening, by a sense of burning. Dilated and varicose capillaries may often be de-

tected and small acne-pustules develop, from time to time, upon the affected surface. The irritable condition of the sebaceous glands may give rise to a greasy, shining appearance of the skin. In such cases no treatment is equal to galvanism, the anode being placed upon the back of the neck and the kathode upon the seat of disease. If the congestion is great and is disposed to linger, I am in the habit of also incising the skin with the needle-knife, encouraging local depletion by sponging with hot water. The distended bloodvessels can be obliterated by passing into them a fine needle which is connected with the kathode of a galvanic battery of from six to ten cells.

Static electricity is of value in relieving the dryness and roughness of the skin so often found in scrofulous subjects. The application, moreover, exerts a decidedly beneficial systemic influence. Small growths, like warts and localized thickening of the integument, can be removed by the alternate use of the static and galvanic currents. Corns upon the toes, and corns or callosities upon the soles are amenable to the same treatment. Sparks are applied daily to the affected regions, and the *séance* is terminated by the passage of the galvanic current. Callosities form upon the fingers as the result of habitual irritation due to occupation. This result is seen, for instance, in professional performers upon stringed instruments, as the banjo, guitar, violin, and harp. Seamstresses and tailors, also, acquire a similar condition from the constant use of the needle. The epiderm is sometimes thickened in consequence of the continued friction between ad-

jacent folds of the skin, as beneath the breasts, in the groins and armpits, between the nates, and upon the perineum. Cases presenting this condition may be treated successfully in the manner indicated. Galvano-puncture affords likewise an effectual means of dealing with warts. The alternate use of franklinism and galvanism is an effectual mode of treating scars, those that are indurated and hypertrophied being especially appropriate to this treatment, inasmuch as they usually prove unyielding to other measures.

Pigmented spots or patches upon the skin seriously detract from or even destroy personal comeliness. The simplest and most common form of pigmentation we see in the familiar freckle. The disfigurement produced by freckles depends much upon their number and size. A few freckles upon the fair face of a young girl may not be unsightly, but when they are sprinkled copiously over the face and upon the backs of the hands, they must undoubtedly be regarded as serious blemishes. In extreme cases, neighboring spots may run together, form blotches of considerable size, and communicate a dingy appearance to the skin. Freckles may be removed, it is true, by the action of mild caustics, but they are very likely to be reproduced, and, indeed, some of the methods that have been employed encourage a subsequent deposit of pigment. The spots are most effectually and permanently removed by the use of galvanism, applied in a manner to be presently described.

Chloasma is, as regards pathologic histology, an enlarged freckle or an aggregation of freckles. In

respect to its etiology it differs from the latter in being often associated with disordered health. Both affections result from a deposit in excess of the normal pigment in the cells of the *rete mucosum*.

The application of the galvanic current will, in the majority of cases, be followed by the permanent disappearance of the discolored spots or patches. In these cases I usually employ galvanism by means of a nickel plate, or by what is even better, a nickel-plated cylinder attached to the kathode. I rotate the cylinder to and fro over the large spots in order to avoid giving the patient pain from concentrating the current upon the integument. Occasionally the metal is left in contact with the pigmentation long enough to give the impression of warmth to the skin. To freckles I am in the habit of applying a strength of from 10 to 15 milliampères every day or two, the sitting lasting from three to five minutes. In chloasma the strength may be increased to 15 or 20 milliampères, applied in the same way, with the same frequency and for the same period as in the treatment of freckles.

Another form of pigmentation is sunburn, or a "coat of tan," so common a result of a summer's outing, especially if much time has been spent upon the water. A sun-browned skin may be justly preferred to a chalky or a pasty complexion. Nevertheless, the "nut-brown maid" will presently begin to inquire whether some means does not exist by which the disappearance of the sunburn may be accelerated. The sharp contrast, especially in the blond, between the hue of the face and that of the neck, shoulders, and arms, is an additional argument for

the removal of the brown color. The same procedures found successful in the treatment of freckles and chloasma will generally prove equally efficacious in removing the effects of exposure to the sun.

Pigmented and hairy moles are sufficiently common defects. A small, smooth mole, destitute of hair, and situated upon the back of the hand, may almost escape notice. If seated upon the face, however, and if covered with hair, they constitute a serious blemish. They are often met with in brunets, and a young lady who possesses regular features, sparkling black eyes and luxuriant tresses, with a brilliant complexion, may have her charms diminished by a large, dark, and hairy spot located upon the chin. Hairy moles may be removed *in toto* by the knife, but many will object to surgical intervention, which has, moreover, the disadvantage of sometimes leaving a scar. In such cases we may usually succeed in bringing about the gradual disappearance of the objectionable spot by the use of the galvanic current or the galvano-cautery.

That variety of birth-mark known as port-wine stain or claret-stain, as well as the more formidable tumor composed of dilated bloodvessels or lymphatic vessels, sadly disfigures the face. Surgical interference often proves ineffectual or only partially successful, is accompanied by profuse hemorrhage, and is followed by cicatrices. In galvanism we possess a treatment for these lesions to which no objection can be urged and which may be relied upon to correct the defect. The current may, according to the circumstances of the case, be applied by means of the sponge electrode or by galvano-puncture.

Excessive activity of the sudoriferous glands constitutes a cosmetic defect. In well-marked cases an abundance of fluid is poured out upon the skin in certain favorite locations. The face, axillæ, genitalia, hands, and feet are particularly prone to be affected. The streaming surface becomes pale and wrinkled, and in some regions an offensive odor is generated, forming an additional affliction. Another form of annoyance is that the sweating is limited to one side of the face. This affection of the sudoriparous glands is often linked with anemia or some other constitutional disease. The systemic and local effects of electricity are therefore to be commended in the treatment of this troublesome and often rebellious condition. I have in many instances witnessed the most decided improvement in consequence of the persistent use of electricity in the form of galvanism or an alternation of galvanism and faradism. Static electricity is also a valuable therapeutic resource in hyperidrosis of the hands or feet.

Electricity is no less potent in affections of the hair. With comparatively little alteration of the scalp, the nutrition of the hair will often fail and the individual will begin to dread the development of premature baldness. The scales of dry seborrhea will fall upon the shoulders, the hair will lose its luster, will become dry and dead-looking, will look rough and ragged, will break or split at the ends, and will be plucked from its roots in the simple act of combing. If this condition be neglected premature alopecia will be the result. In other cases the loss of hair will be limited to certain spots, and the peculiarly unsightly patches of *alopecia circum-*

scripta will be the outcome. No method of treatment is so successful in checking the progress of baldness as the application of electricity, which increases the nutrition of the scalp and the hair-follicles. No case need be regarded as hopeless in which atrophic destruction of the follicles has not occurred. Nevertheless it is advisable that treatment should be begun at an early stage in order to avoid unnecessary loss. Falling of the hair is regarded as a grievous misfortune by women, who are thus threatened with the loss of one of Nature's ornaments. In men the process may attack not only the head but also the beard. Both faradism and galvanism are admirable tonics to the hair-follicles. In beginning treatment it is my custom to use only mild currents. A galvanic current of the strength of not more than from 10 to 20 millampères may be applied by means of moistened sponge electrodes, or what is, perhaps, a better method, through a brush having metallic bristles. Faradic currents may likewise be conveyed in the same way through a wire brush, the moistened sponge electrode being held in the hand of the patient or on the back of the neck. The brush is slowly passed over the scalp until the skin is reddened.

Used in the same manner electricity serves to arrest the approach of premature grayness. As the loss of color is feared by women almost as much as baldness, they can very readily avail themselves of the advantages of electric treatment. This method prevents early grayness by a tonic influence upon the entire hair-forming apparatus.

The Medical News.

Established in 1843.

A WEEKLY MEDICAL NEWSPAPER.

Subscription, \$4.00 per Annum.

The American Journal

OF THE

Medical Sciences.

Established in 1820.

A MONTHLY MEDICAL MAGAZINE.

Subscription, \$4.00 per Annum.

COMMUTATION RATE, \$7.50 PER ANNUM.

LEA BROTHERS & CO.

PHILADELPHIA.